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**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF OREGON  
PORTLAND DIVISION**

**NORTHWEST ENVIRONMENTAL  
DEFENSE CENTER, WILDEARTH  
GUARDIANS, and NATIVE FISH  
SOCIETY,**

Plaintiffs,

v.

**U.S. ARMY CORPS OF ENGINEERS  
and NATIONAL MARINE  
FISHERIES SERVICE,**

Defendants,

and

**CITY OF SALEM and MARION COUNTY,**

Defendant-Intervenors,

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**Case No. 3:18-cv-00437-HZ**

**PLAINTIFFS' RESPONSE ON EXPERT  
PANEL'S IMPLEMENTATION PLAN  
FOR USE OF LOWER REGULATING  
OUTLET AT DETROIT DAM**

Plaintiffs' response to Federal Defendants' September 13 submissions on the Detroit implementation plan addresses three points: (1) the modification to interim measure 5, (2) the plan for use of the lower RO at Detroit for temperature control, and (3) the need for a holistic, comprehensive RM&E approach. Plaintiffs' comments are based on their experts' knowledge and belief about what is best for Chinook salmon and steelhead in the North Santiam River.

#### **A. Modification to Interim Measure 5.**

Federal Defendants submitted a modified version of interim measure 5 ("IM 5") on September 13 because some of the details in the existing version are incompatible with the plan for using the lower RO at Detroit Dam for temperature control during the Chinook salmon incubation period. ECF 215 (filed under seal). The modified version allows for more discretion in operating the upper ROs for fish passage in conjunction with operating the lower RO for temperature control as well as conducting total dissolved gas ("TDG") management. As the expert panel agreed, using the lower RO for temperature control is a priority over using the upper ROs for fish passage during the salmon incubation period. ECF 213-1 at 6, 8. Thus, to allow for this priority and also keep TDG below the state standard, IM 5 must be adjusted.

Given that Plaintiffs' experts had identified the need to modify IM 5 from the start of discussions, they agree with the modification. However, they recommended an additional sentence be added, which the federal experts did not acknowledge or include in the final language submitted to the Court. Plaintiffs' experts recommended adding the following sentence at the end: "Daily discharge will be managed during this period such that at least one half of the daily discharge passes through the non-turbine outlets, except as may be needed to limit downstream TDG." This sentence is similar to the sentence in the current version that states: "At least 50% of the total daily flow shall pass thru (sic) the regulating outlet structure (therefore the

rest of flow would be through the turbine).” *See* ECF 215.

The additional sentence is needed in IM 5 to ensure that more than half the daily flow is going through either the upper or lower ROs rather than the turbines to make best use of the ROs for either fish passage or temperature control. Without this language, power peaking operations during daytime hours could result in most of the daily flow being discharged through turbines, reducing the flow available to the ROs to provide temperature control or fish passage. Indeed, Plaintiffs’ recommendation merely reflects the same intent included in the current version. Thus, Plaintiffs request the Court adopt the modified IM 5 submitted by Federal Defendants with the addition at the end of the sentence proposed by Plaintiffs’ experts quoted above.

**B. Plan for Use of Lower RO at Detroit in 2021.**

Plaintiffs’ experts continue to recommend immediately increasing flows to 2,000 cfs even after reading Federal Defendants’ brief (ECF 215). The general goal of the expert plan is to be able to begin using the lower RO at Detroit for temperature control in mid to late October, but for this low-water year it is particularly important to allow for use of the lower RO by mid-October to try to maintain water temperatures within their targets.

Federal Defendants state in their brief that if the current dry weather continues and inflows average 500 cfs, the reservoir could reach elevation 1465’ by October 15 if the Corps discharges 2,761 cfs per day from Oct 1-15, but average October weather would require larger discharges. ECF 215 at 2. Plaintiffs’ experts have several concerns with this analysis.

First, it is unlikely that inflows will average 500 cfs through October 15. Plaintiffs’ experts consulted streamflow data from the two major streams that enter Detroit Reservoir, the

North Santiam River and the Breitenbush River.<sup>1</sup> The data revealed that during the period 1977-2020, September inflows from these two streams averaged about 580 cfs per day while October inflows averaged about 740 cfs per day. Thus, it is likely that discharges in October will need to be higher than 2,761 cfs to access the lower RO by October 15. Keeping discharge at 1,500 cfs through the end of September increases the risk that flows exceeding 3,000 cfs would be needed to achieve reservoir elevation 1465' by October 15, which would exceed the maximum flow objective during Chinook spawning and increase the likelihood of high TDG. Plaintiffs' experts conducted an analysis similar to the Corps' using average inflows for September and October, rather than the constant 500 cfs inflow assumed by the Corps, and determined that raising flows to 2,000 cfs now would substantially reduce the risk that such high flows would be needed in early October to allow for use of the lower RO by October 15.

Second, Chinook spawning in the North Santiam occurs until the second or third week of October. Thus, any redds deposited in October would be more likely to be dewatered under the federal experts' flow plan compared to Plaintiffs' experts' plan because October flows would be higher. Late spawning Chinook are important to protect to maintain species diversity, and also are the ones most likely to have successful reproduction because their fry would emerge later, in February or early March.

Third, Federal Defendants claim that the Corps has consistently attempted to keep September flows near 1,500 cfs to reduce the possibility of dewatering redds, and that they should maintain that regime. ECF 215 at 3. However, streamflow data (Niagara gage, North Santiam) going back to 2008 shows that flows in the North Santiam immediately downstream of the project dams during the period September 15-30 have greatly exceeded 1,500 cfs in about

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<sup>1</sup> USGS Station No. 14178000 North Santiam River below Boulder Creek, and Station No. 14179000 Breitenbush River above French Creek, both of which are near Detroit, Oregon.

half of those years, with a mean flow of about 2,200 cfs. Furthermore, the low flows of 1,200 cfs that create the concern of dewatering during incubation are not very common, with 2008-2020 streamflow data for October 15-February 15 showing the average number of days that flow was equal to or less than 1,200 cfs was just 7.6 days, and almost always occurred in February when most fry would have already emerged from redds.

The whole point of the action at issue in this plan is to try to improve reproduction below the dams in the North Santiam because reproductive success has been poor, due largely to warm water temperature during incubation. *Changing* operations is needed to lower water temperatures and increase production. Thus, the proposal that will most likely allow for use of the lower RO at Detroit by mid-October should be adopted. Raising flows to 2,000 cfs immediately provides more assurance of reaching reservoir elevation 1465' by mid-October even if precipitation increases over the next month, and would allow for a less drastic increase in flow in October compared to the federal experts' flow plan. Plaintiffs request the Court adopt their experts' proposal to immediately raise flows to 2,000 cfs.

### **C. Holistic RM&E Plans.**

Finally, Plaintiffs want to emphasize the need for a holistic approach to RM&E given Federal Defendants' attempts to compartmentalize each of the Court's expert tasks and interpret the Order as narrowly as possible. Monitoring interim measures 5-7 is necessary to assess the tradeoffs between actions that have three different goals: improving water temperature, improving fish passage, and maintaining TDG within water quality limits. Indeed, the Court even acknowledged that it is not clear "how some of the injunction measures can be implemented in a comprehensive manner that balances the potential tradeoffs, accounts for the multifarious variables, and provides the most benefit to the listed salmonids." ECF 212 at 28-29.

Federal Defendants' cramped reading of the Court's Order, ECF 215 at 4-5, would make it impossible to monitor the tradeoffs involved with measures 5-7 and evaluate how to coordinate the measures in the future to achieve the most benefit for salmon and steelhead.

This same principle applies to interactions of other interim measures. Given Federal Defendants' narrow view that RM&E should address only the individual actions ordered by the Court within separate implementation plans, Plaintiffs have no doubt they will oppose future comprehensive and holistic RM&E that our experts intend to propose. Like with interim measures 5-7, many of the actions ordered by the Court interact with other measures. Actions that take place at Foster Dam will interact with operations at Green Peter, actions at Hills Creek, Lookout Point, and Dexter are all interconnected, and measures at individual dams during different seasons will interact such as fall and spring operations at Cougar Dam. Developing individual RM&E plans for each action without considering other related actions will not give a comprehensive evaluation of effects on the fish.

The goal of the interim measures is to reduce overall harm and provide the greatest overall benefit to the species. Keeping RM&E separate for each action will prevent the comprehensive approach needed to assess these measures as they are integrated with each other. Thus, in addition to RM&E plans that accompany each expert task, a larger-scale, comprehensive RM&E plan should be developed for each sub-basin to evaluate the integrated effects of all interim measures in that sub-basin and overall impacts on the salmonids. Plaintiffs request the Court clarify that the expert panel should develop such a comprehensive RM&E plan for each sub-basin that would accompany the individual implementation plans.<sup>2</sup>

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<sup>2</sup> Plaintiffs also maintain the request from their first brief that the Court clarify the experts can communicate with other individual experts on the panel. *See* ECF 214 at 4-5.

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Respectfully submitted,

/s/Lauren M. Rule

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